

~~SECURITY INFORMATION~~

Assistant Director for Research and Reports

12 August 1952

Special Assistant to AD

ORR Research Program - Summary and Conclusions

1. On the basis of ORR experience for the past two years Task Force I has shown the gaps in our economic intelligence information and research methods and techniques. The 3-51 and 3-52 series projects were intended to fill these gaps, but failed to do so. Moreover, they have demonstrated the fallacy of an economic intelligence research program by popular election, rather than centralized direction and control.

2. On the positive side, basic principles which could serve as a framework for a complete research program have been developed and are contained in the following ORR publications and projects:

- (a) The Role of ORR in Economic Intelligence - 1 August 1951
- (b) Suggested Check List for Commodity and Industry Studies - 13 December 1951
- (c) Standard Classification of Economic Activities - 18 July 1952
- (d) 110-51, Economic Capabilities for War of USSR and Satellites
- (e) NIE-65, Soviet War Potential 1952 - 1957
- (f) Appraisal of Foreign Economic Intelligence Requirements
(Appendix B to Tab A)

3. It is recommended that all Branches be assigned broad subjects (based on selections already indicated from the Standard Classification of Economic Activities) in accordance with their respective substantive responsibilities, and on the broader aspects thereof, as a basis for working papers comprising basic studies. These are to be completed in a limited time, to be followed shortly thereafter by definitive reports on the same broad subjects. The guiding principles of these reports will be the suggested Check List for Commodity and Industry Studies. As part of this over-all program specific Branch projects may be proposed by the Branches for publication. These should be carefully appraised and considered subordinate to the main research objectives.

4. Projects 110-51 and NIE-65 comprise methods and techniques for the development and application of the basic economic information and the relevance of the latter are shown to problems of national security. These projects can be extended in connection with other items and problems relating to cold and hot war.

5. About 40 high priority special projects, based on careful study and selection, of which more than one-third relate directly to the Soviet Bloc, and which comprise comprehensive problems relating to national security have been developed in an ORR paper on Foreign Economic Intelligence Requirements (Appendix B to Tab A). These should be used as a point of departure in the selection of broad economic intelligence projects.

6. The paper on The Role of ORR in Economic Intelligence sums up clearly the general principles which could be most useful in connection with all of the research of ORR.

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ORR Research Program

1. Introduction

The object of this report is the development and/or selection of certain basic principles to serve as a guide or framework, as well as a concrete basis, for a research program for ORR following the completion of the 3-51 and 3-52 series in September. This group of projects was a follow-up of Task Force I, and together with the latter was the major sector of the ORR Research Program for 1951 and 1952. The conclusions and experience gained from these two programs (which will have taken the better part of two years for completion, even if largely of a negative character) are most useful as a background and perspective for future research programs. These conclusions were presented in a memorandum dated 8 May, but will be summed up briefly here as they are not only pertinent to the conclusions in this report, but it is also desirable that we avoid some of their pitfalls. On the more constructive and positive side in connection with the development of a new program, are the principles developed and summed up from various office papers and special projects. These will be discussed below in connection with the principal conclusion of the present memorandum that the application of these principles, if carefully selected and properly appraised, should serve as a framework and basis for a sound economic intelligence program. Another report, to follow the present one, will be directed to a discussion, including tables, of the basic economic data, which are the "building blocks" of our economic intelligence reports and estimates. This is done with a view to their improvement rather than criticism of our present estimates.

2. Task Force I

Task Force I, designated as "an inventory of ignorance," served its purpose in this respect emphasizing particularly the weak areas of knowledge in ORR which, however, were already known to exist. They included sparseness of use patterns and input data, and lack of or deficiencies of consumption and requirements data. The reports were also notable for the inclusion of large amounts of extraneous and irrelevant material of a text book and encyclopedic character. In addition, many of the contributions contained specific cases of unwarranted conclusions, and also in most cases, the analysts failed to disclose the methods and techniques employed to make the estimates. One of the principal positive contributions of Task Force I, in addition to an over-all review, was the excellent "Check List for Commodity and Industry Studies," which first appeared at that time in a preliminary way and later was consolidated. Task Force III contributions to NIE-33 were excellent as area studies of the Satellites.

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3. 3-51 and 3-52 Series

The principal purpose of the 3-51 and 3-52 series was to fill the gaps and remedy the deficiencies in Task Force I. With few exceptions they have failed to do this. The reasons for this appear to be that in the majority of cases the analyst was allowed to be his own judge of the gaps and deficiencies in Task Force I; also he was left free in general to choose his own subject, and the method of pursuing the same. This has resulted in the program, as a whole, being non-cohesive, and the individual projects, especially where they relate to specific subjects, are narrow in scope, are not of a definitive character, and in most cases lack critical aspects from the intelligence viewpoint. The lack of coordination and proper research direction of the program as a whole is highly evident in the result. Finally, the sound principles developed in the office papers (referred to below) as a framework and guide to our basic research in economic intelligence were largely overlooked in the 3-51 and 3-52 series program.

4. Selection and Appraisal of Principles as a Guide and Framework for Research Programs

It is one of the most important conclusions of the present memorandum that within the four corners of the following documents and projects (and the extensions thereof) will be found the basis of a sound framework for our research generally as well as for a concrete research program which will serve the requirements for foreign economic intelligence, and needs of ORR.*

- a. "The Role of ORR in Economic Intelligence," 1 August 1951
- b. "Standard Classification of Economic Activities" (and previous industrial classifications,) 18 July 1952
- c. "Suggested Check List for Community and Industry Studies," 13 December 1951
- d. 110-51, "Economic Capabilities for War of USSR and its Satellites"
- e. NIE-65, "Soviet War Potential 1952-1957"
- f. "Appraisal of Foreign Economic Intelligence Requirements"

All of the requirements for a good research program are clearly set forth in the above references, although they require selection and

* Some of the important principles, e.g. balance of supplies against requirements and the determination of consumption and use patterns involved in these later papers and projects, have been developed in essence in reports made as far back as 1949 (ORE 2449, "Petroleum in the USSR" and IM-181.)

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integration. Another problem for their implementation is a full understanding and acceptance of them, and of their applications by all concerned in ORR. The brief discussions below are intended to indicate the bearing which each may have on the proposed general research program. From this a framework may be developed and specific research projects set up as desired.

5. The Role of ORR in Economic Intelligence

The main problems with which ORR is concerned are those foreign economic problems relating to national security, particularly the economic capabilities and vulnerabilities of the Soviet Bloc. Some of the criteria involved are as follows:

"(1) to estimate the magnitude of possible present or future military or other threats to ourselves and our allies . . . (2) to estimate the character and location of possible present or future military or other threats . . . (3) to assist us in estimating, within the range of the possible, the intentions of the USSR or any other potential enemy . . . (4) to help policy-makers decide what we can do to reduce possible or probable military or other threats by impairing an enemy's economic capabilities to carry them out . . . (5) to assist in estimating the probable development of the relative strengths of the East and the West over the next few years if global hostilities are avoided."

Some of the important factors developed in the report as a guide to the special problems involved in ORR's research are shown below:

The difference between economic intelligence and information, i.e. the latter does not become economic intelligence until its relevance to national security is made clear; also that a common measuring rod must be devised to add up in incommensurables, and unlike things and activities to an index of capabilities. It is also emphasized that the foundations of our knowledge must be improved to give better and quicker answers in response to day-by-day pressures on the question of determining basic research priorities. The bottleneck "fallacy" is eliminated as an important factor in the research program. The relevance to tomorrow's needs must be foreseen of the basic research selected for our efforts. The principle of selection or stressing of any particular subject to the exclusion of other necessary subjects, particularly from a long-range viewpoint, is discarded on the basis that for a proper study to be made exclusively of a subject, e.g., such as requirements, techniques and methods of production, etc., could conceivably utilize the energies of the entire staff of ORR.

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The main conclusion of this office paper is that if the design of a basic study is properly drawn, information about all of the parts of that study is required to arrive at conclusions and no single part can be left out entirely if satisfactory conclusions are to be reached. The solution of the problem proposed is the method of successive approximation which consists in laying out in general terms the specifications of what you would like to know, e.g. industries, commodities, and resources to be studied and the principal problems to be solved, and then to concentrate for a brief period on the important parts of the problem about which the least is known until it is brought up to a level of our knowledge of the other parts of the picture.* A list of problems of interest each of which is discussed at length in the report is as follows:

- (a) The need for more study of goals, plans, and organization
- (b) The need for more systematic study of Soviet military intentions as revealed in economic events
- (c) The need for more study of the relations among industries
- (d) The need for more study of the economic requirements of military operations
- (e) The need for more study of particular industries, commodities, and services
- (f) The need for more study of technical aspects of Soviet industry
- (g) The need for more study of the interdependence of areas
- (h) The need for more study of the index number problem.

6. Suggested Check List for Commodity and Industry Studies

This check list is a carefully worked out study of the kind of information it has been found necessary to fully describe a particular commodity or industry in order to understand its relationship to the economy as a whole. In addition to a very brief introduction with

* On the question of specific problems it is pointed out that in a study of current problems in foreign economic intelligence by ORR for the National Security Council a very incomplete sample yielded a list of 42 top priority problems. This list is reviewed below with regard to those which might have special interest in connection with the present program.

regard to history, location, organization, and technology of the industry, the study should also include the following information:

- a. Production facilities and resources (both existing and convertible)
- b. Supplies including outputs and production capacities, stockpiles, inventories, reserves
- c. Inputs and input requirements
- d. Use pattern and use requirements, substitutes.

The techniques and methods employed in arriving at the results should be clearly stated in the appendix.

7. Standard Classification of Economic Activities (including Industrial Classification)

The detailed classification of economic activities furnishes a complete basis for the selection of those commodities and industries with which OPR is concerned. The present standard classification dated 18 July 1952 is an enlargement, and development of the report of 18 April 1952. The most recent report contains about 500 items as divisions and subdivisions of the following principal activities arranged according to the table of contents.

- a. Agriculture, Forestry, Hunting and Fishing
- b. Mining and Quarrying
- c. Manufacturing
 - (1) Basic Metal Products
 - (2) Machinery
 - (3) Transportation Equipment
- d. Construction
- e. Electricity, gas, water, and sanitary services
- f. Commerce
- g. Transport, storage and communication
- h. Services
- i. Military items

The above divisions are arbitrary and it is obvious that a careful selection must be made from the total of 500 items to make it practical as the basis of a research program. This selection could be based on any one of a number of breakdowns already made, for example according to the office memorandum of 20 May 1952, on "Proposed Reorgani-

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zation of Economic Divisions, ORR,* or according to the selection of items resulting from the collapsing of subdivisions to fit the responsibilities of the organization by divisions, branches, and sections which the writer drew up about the same date. The main point developed here is that there is a basis for an immediate point of departure in this respect.

8. General Research Program Recommendation

From all of the foregoing we can clearly derive a proper approach to our major research activity namely the compilation of basic data on a variety of industries, with respect to the Soviet Bloc. This activity must be a continuing process on a current basis, as well as for the past and future by projection. ORR's organization as well as its personnel is set up primarily at present to accomplish this objective. In fact, these data are ORR's primary product and all of its final products depend on this kind of intelligence information. Efficiency and accuracy in the handling of special projects and in the response to the day-by-day pressures for which ORR is called upon, depend upon improvement in the foundation of our information. It has been demonstrated that the 3-51 and 3-52 series, in general, do not accomplish this purpose. Hence, it is recommended that each branch and/or section be assigned the job of completing (within a limited time) a working paper covering selected subjects within the scope of their responsibilities and fields of interest. These shall follow the principles elucidated in sections 5, 6, and 7 of this report and shall take advantage of the criticism directed against the 3-51 series, particularly, and any other questions raised in the preceding sections.* After completion the working paper is to be used as a basis for a definitive report which will also follow the principles shown in the check list for commodity and industry studies (section 6 of this report) and in a sense will be a carefully edited (from both the substantive and "semantic" viewpoints) cut-down version of the working paper. A limited time will likewise be set on the definitive report which, when completed, will be published as a formal report.

* Special precautions should be taken to avoid "stuffing" and "window trimming" particularly in the historical and technological sections of the working paper, and to include a complete literature search based on, e.g. Soviet publications, [redacted] (and External Research generally), and the results of the Basic Intelligence Division. A complete bibliography should be included with full explanation of the basis of selection of the path leading to the official estimate.

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9. Recommendations for Special Research Projects

ORR already has underway a group of special projects which are in line with correct procedures and objectives of our research efforts as outlined above. Examples of these are 110-51 and NIE-65, which were requested by the Joint Chiefs and the National Board of Estimates respectively. Extensions of these projects and similar ones will be necessary as outlined below, and they should also be included in the program. In the development of a program involving special projects, the problem is one of narrowing down the selection rather than in "dreaming up" new projects. As has already been pointed out under section 5, on the question of specific problems, a study of current problems in foreign economic intelligence by ORR for the National Security Council yielded a list of 42 top priority problems from "a very incomplete sample." These problems which were carefully drawn-up, as well as other problems previously considered should be reviewed as part of the present program, particularly a section bearing directly on the Soviet Bloc. A review should also be made of the proposed program of the Board of National Estimates (e.g. 22 April 1952) and its critique of its NIE's on the USSR, 18 February 1952. Conferences should be held on a continuing basis with the National Board of Estimates as well as with the NSC, IAC, and other groups which originate intelligence projects and requests so that we have the benefit of their thinking in our own field of economic intelligence to assist us in developing our own top priority problems. The following is a brief review of some individual questions raised in section 9 to develop the relationship of these questions to a research program for the immediate future.

10. Special Projects in Process Which Bear Directly on Proposed Research Program

a. 110-51, "Economic Capabilities of the Soviet Bloc to Support a General War"

This is an extensive project covering the analysis of a large number of economic sectors in which an attempt has been made to follow the suggested check list for commodity and industry studies. The complete outline of the study is given in a memorandum dated 3 December 1951. Because of the lack of basic economic information of the kind referred to under section 8, it has been necessary to develop this information especially for this project; and completion of the first phase of has consequently been delayed and postponed. In addition the pressures on the various analysts in connection with obtaining the required information on time has resulted in some questionable estimates, particularly on inputs and requirements. These deficiencies can, in due course, be subjected to the principle "of successive approximations" to improve them. Despite these defects the project will represent a marked advance in the art; and the project represents the type of research that should be continued by ORR.

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The cold war aspects of the project, which required about one year, will be completed shortly. After this is completed the hot war estimates will be made. The principles of IM-51 should be extended for both cold and hot war to include other commodities and industries, e.g. ferro-alloys, such as molybdenum, vanadium, tungsten, cobalt, nickel, and chromium; explosives such as TNT, Picric acid, Amatol, RDX, single and double base propellants; additional non-ferrous metals such as zinc, lead and tin; precision and scientific instruments and special equipment and machinery (other than machine tools, which is already included); atomic energy, raw materials as well as others.*

b. NIE-65, "Soviet War Potential 1952-1957"

This project involves a special index technique for combining heterogeneous items into a common expression for each component in the same terms. The product will consist of a time series of physical output levels from 1927 to date and will be projected to 1957. Output estimates for various products will be combined into a total which will represent output and rate of growth for an industry as a sector or as a whole, for example, individual non-ferrous metals (such as copper, lead, zinc, tin and aluminum) and in combination with each other to form a group or sector. These may then be combined with other groups or sectors such as iron, and steel and the ferro-alloys to form larger groups. It is obvious that this technique, while it may have certain limitations, may also be applicable to many other large sectors; perhaps as an index (even if in approximate form only) of the entire economy. The technique, therefore, may be the basis alone or in combination with others of continuing research projects in a new program.**

* These and others in the present program were included in a project which was similar to IM-181 designated as the Munitions Board Project entitled, "Soviet Production, Requirements, Purchases, Imports, etc. of Selected Commodities," 19 May and 20 June 1950. The principle of balancing supplies against consumption and requirements, and that of inputs, was also included in these projects. IM-181 was published. The Munitions Board Project was interrupted by the reorganization in 1950.

** The technique involves multiplying each physical output estimate by the permanent price of the product, thus obtaining output estimates in value terms. The separate arithmetic products are then summed up to obtain a value estimate of production for the industry as a whole. Usually the comparisons are made in terms of a percentage of a base period; hence, the term index number. By projecting this trend forward, production estimates for future years can be presented.

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11. Other Special Projects

a. Appendix B to Tab A, Foreign Economic Requirements, etc.

This paper developed in ORR after considerable thought and study sets forth some 40 top priority projects of foreign economic intelligence having a direct bearing on national security. At the outset it emphasizes that first priority should be given to economic analysis in support of policies relating to the conflict between the Soviet and non-Soviet worlds and requires intelligence relating to the capabilities, the vulnerabilities, and the intentions or probable courses of action: (1) the USSR and its Satellites (including China); (2) the principal European and Asiatic allies of the United States; and (3) a band of countries on the fringe of the iron curtain not now clearly in either camp, but potentially contributing to the strength of one or the other.* If one is to choose priorities among priorities in order to limit the problem to a practical scope it is obvious that section B (of Appendix B to Tab A) of this report is most significant being limited to: "Economic Analysis Relating to the USSR and Satellites." The examples of high priority economic intelligence projects in this section have been selected as most pertinent to our present interests, and are shown in Appendix A of this report. A further concentration of this group by elimination of those of lesser priority, or combinations within it, would provide an excellent specific research program in addition to the sectors of the proposed general program discussed above.

b. Miscellaneous Projects

As emphasized in the foregoing discussion the problem of a research program at present, particularly on specific projects, is mainly one of selection rather than of origination. For example, if one were to consider additional projects some such as the following might be taken "out of the hat": (1) The Separate and Combined Effects of the Overrunning of Various Areas by the Soviets; (2) various facets in the important study of "Conversion and Rearmament" such as place, timing and phasing in the conversion from cold to hot war; (3) The Long-Range Impact of Soviet Development and Technology on Soviet Military and Economic Capabilities; (4) The Decentralization of Industry in the USSR; (5) The Long-Range Impact of Communism on Soviet Military, and Economic Capabilities; (6) A Study of Soviet Planning (particularly the 1961 Detailed Plan) in Relation to Qualitative and Quantitative Aspects of Soviet Industry; (7) A Map Study of Soviet Industrial Capabilities and Vulnerabilities; (8) Expansion of 110-51 to the whole Industrial

* It also refers to resources in the rest of the world, e.g. Africa, Latin America, etc. which may contribute significantly to the strength of either center of power.

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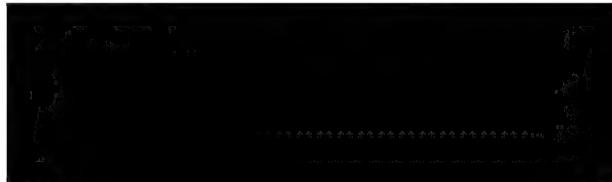
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Classification, etc. Obviously, the list of problems like these (which are undoubtedly important) could be expanded indefinitely.

c. Branch Projects*

As a matter of policy all branches (and in fact all individuals) should be called upon and encouraged to submit individual research projects. However, if such projects were properly selected they could be included almost by definition, in the working papers and in the definitive reports referred to above. This question therefore resolved itself apparently to one of separate publication of the proposed specific subject, which in special cases may have merit. Any selection of individual branch projects should, however, take into account the program as a whole, which as already emphasized should be centrally controlled and directed towards a unified objective for satisfactory results.

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* As examples of diversified branch projects which could be investigated with profit (on the basis of a substantial bearing on problems of the Soviet economy) a list of specific projects dealing with 20 categories of about 5 subdivisions each was developed and reported by the writer in March 1950

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Appendix A

Memo for the Executive Secretary, NSC, subject: "Appraisal of Foreign Economic Intelligence Requirements, Facilities and Arrangements to the National Security", dated 31 May 1951, CIA 427174, Appendix B to Tab A

B. "Economic Analyses Relating to the USSR and its Satellites"

"Examples of high priority economic intelligence projects are as follows:

1. "Analysis of the economic capabilities of the USSR and its satellites to engage in military action or to employ "cold war" measures against the United States and its allies or against "neutrals"

a. "Wartime Capabilities of the Soviet Bloc to Meet Essential Civilian and Military Requirements for Selected Critical Items (e.g., electronics equipment, copper, tin, aviation fuel, special machine tools, ferro-alloying metals, precision instruments, natural rubber, etc.)

b. "Economic Capabilities of the Soviet Bloc to Develop and Produce Selected Military Items (e.g. atomic weapons, guided missiles, germ warfare agents, radar, long-range jet bombers, tanks, submarines, etc.)

c. "Effect on Soviet Economic Capabilities for Prolonged War of the Acquisition by the USSR of Additional Areas, Such as a) Western Europe, b) the Middle East, c) Japan, d) Southeast Asia

d. "Over-all Economic Capabilities of the Soviet Bloc as a Whole Simultaneously to Conduct Specified Military Campaigns and Maintain Essential Civilian and Military Production

e. "Effect of the Korean War Combined with Western Export Controls on the Capabilities of the Chinese Economy Both With and Without Soviet Assistance.

f. "Economic Capability of the European Satellites Unassisted by the USSR to Wage War on Yugoslavia. Requirements for Soviet Assistance

g. "Capabilities of the Soviet Bloc to Wage Economic Warfare Against Non-Soviet Nations

2. "Analysis of the economic vulnerability of the USSR and its Satellites to measures of economic warfare, psychological warfare and to military attack, including strategic bombing"

a. "Vulnerability of the Soviet and Satellite Economies, Including China's, to Strategic Bombing with Particular Reference to Their Vulnerability to A-bomb Attack

b. "Vulnerability of the Soviet Bloc as a Whole to a Western Program of Economic Warfare. Relative Vulnerability to Various Measures- Overt and Covert.

c. "Vulnerability of the Chinese Economy to Western Controls on (a) Exports to China (b) Shipping

d. "Vulnerability of the Soviet and Satellite Economies to a Program of Induced Defection of Key Technical and Industrial Personnel

e. "Vulnerability of the Soviet and Satellite Food Supply to Biological Warfare

3. "Analysis of economic indications of probable Soviet and satellite courses of military, and political action and analysis of all indications of probable courses of economic action"

a. "Economic Activity Within the USSR and Its Satellites Which Might Reveal Their Intention to Resort to Military Action

b. "Patterns of Allocation of Economic Resources for the Production of Military Items Within the Soviet Bloc Which Might Reveal the Kind of Military Operations Contemplated

c. "Courses of Action Likely to be Taken by the USSR in Response to an Effective Western Program of Export Controls

d. "Soviet Economic Measures With Respect to China Which Might Reveal the Extent of the Political and Economic Integration of These Countries

e. "Evidence Which Might Suggest What Air Target Systems the Soviets Would be Likely to Adopt for Western Europe."

OFFICE OF RESEARCH AND REPORTS

Reports Division

29 August 1951

Project 3-51 (T.F. I) Papers To Be Issued as Provisional Reports*

Materials Division

Sulphuric Acid
Coke Chemicals
Caustic Soda and Chlorine Industries
Synthetic Ammonia Industry
Sulphur
Grain and Grain Products
Aluminum
Copper Industry
Lead Industry
Tin Industry
Zinc Industry
Coal

Economic Services Division

Rail Transportation
Inland Water Transport
Highway Transport
Pipelines
Railway Gauge Differential and the Transloading Facilities
of the Western Soviet Frontier
Merchant Shipping
Power Production in the Urals
Population and Manpower

Industrial Division

Machine Tool Industry
Electron Tube Industry
Anti-Friction Bearings

* This is only an initial selection. Others will be included in later lists.

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